

Authors response to Covid-19 vaccination, semen concentration and total motile count:
Correspondence

Itai Gat^{1,2,3}, Alon Kedem^{2,3,4}, Michal Dviri⁵, Ariel Hourvitz^{2,3}, Micha Baum⁶

¹ Sperm Bank & Andrology Unit, Shamir Medical Center, Zrifin, Israel

² IVF Department, Shamir Medical Center, Zrifin, Israel

³ Sackler Medical School, Tel Aviv University, Israel

⁴ Sperm Bank, Herzliya Medical Center, Israel

⁵ IVF Department, Herzliya Medical Center, Israel

⁶ Sperm Bank, Sheba Medical Center, Ramat Gan, Israel

Dear editor.

We thank Mungmunpantip and Wiwanitkit for their contribution to the academic discussion regarding our study “Covid-19 vaccination BNT162b2 temporarily impairs semen concentration and total motile count among semen donors” [1]. The study focused on sperm donors (SD) since they supply repetitive semen samples – important method to overcome natural semen parameters’ fluctuations and variations. The main finding of the study, which included 37 SD and 216 samples over 4-time frames, is temporary concentration and total motile sperm count decline 3 months after vaccination. We hypothesized that immediate immune response may be the mechanism for that deterioration.

In their letter to editor, Mungmunpantip and Wiwanitkit [2] emphasized the importance of patients’ comorbidity, specifically pre- and post-vaccinations infectious status, as important factors which may impact spermatogenesis. That comment is important and relevant for the study so we thank them for the opportunity to clarify that aspect.

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the [Version of Record](#). Please cite this article as [doi: 10.1111/andr.13239](#).

This article is protected by copyright. All rights reserved.

Each candidate for donation underwent routine detailed and comprehensive clinical evaluation regarding his general health prior to acceptance as donor. None had chronic disease so systemic chronic comorbidity is not relevant for that population. Regarding infectious diseases status, prior to vaccinations each donor had PCR test in cases of clinical suspicion and specifically on each day of sample providing to avoid theoretical Covid-19 transmission to recipients. None of the donors had positive result, so pre-vaccination covid illness exclusion is realistic. Furthermore, semen samples were routinely quarantined for at least three months for repetitive serology evaluation to hepatitis B, C, HIV, TPHA and CMV prior to releasing them for fertility treatments. In addition to infectious laboratory workup, donors are instructed to report any health symptoms and concerns prior to providing samples to exclude sample supply during acute illness.

In conclusion, the clinical and laboratory routine workup of SD is likely to exclude pre-vaccination chronic or acute disease explanation for the study results. However, we thank Mungmunpantipantip and Wiwanitkit for their comment and support further studies which may include extra-serological tests screening for additional infectious diseases.

Conflict of interest: none

Funding: none

References:

1. Gat I, Kedem A, Dviri M, Umanski A, Levi M, Hourvitz A, Baum M. Covid-19 vaccination BNT162b2 temporarily impairs semen concentration and total motile count among semen donors. *Andrology*. 2022 Jun 17. doi: 10.1111/andr.13209. Online ahead of print.

2. Mungmunpantipantip and Wiwanitkit. Covid-19 vaccination , semen concentration and total motile count: Correspondence. Andrology.